

Amendments to the Claims under Revised 37 C.F.R. § 1.121

Claims 1-8 (cancelled).

Claim 9 (previously amended): A polypeptide having an amino acid sequence as set forth in SEQ ID NO: 5 produced by a process comprising:

- (a) culturing a host cell containing a vector comprising a nucleic acid having a nucleotide sequence:
 - (i) as set forth in SEQ ID NO. 4;
 - (ii) of a DNA insert encoding a Secs-1 polypeptide in ATCC Deposit No. PTA-1755; or
 - (iii) encoding a polypeptide having an amino acid sequence as set forth in SEQ ID NO. 5; under conditions suitable to express the polypeptide; and optionally
- (b) isolating the polypeptide from the culture.

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Claims 10-12 (cancelled).

Claim 13 (previously amended): An isolated polypeptide comprising an amino acid sequence:

- (a) as set forth in SEQ ID NO: 5; or
- (b) encoded by a DNA insert encoding a Secs-1 polypeptide in ATCC Deposit No. PTA-1755.

Claim 14 (previously amended): An isolated polypeptide comprising:

- (a) an amino acid sequence as set forth in SEQ ID NO: 6, optionally further comprising an amino-terminal methionine; or
- (b) a fragment of the amino acid sequence set forth in SEQ ID NO: 5 comprising at least about 25 amino acid residues, but not more than 80 amino acid residues, wherein upon injection into an animal the fragment produces an antibody that binds to the polypeptide set forth in SEQ ID NO: 5.

Claim 15 (currently amended): An isolated polypeptide comprising ~~the~~ an amino acid sequence as set forth in SEQ ID NO: 5[[:]]

Met Arg ~~Leu~~ ~~Leu~~ Xaa ~~Leu~~ Ser Xaa ~~Leu~~ Xaa Xaa Xaa ~~Leu~~ Xaa ~~Leu~~ Cys Xaa Xaa Xaa
Xaa Ser Xaa Glu Gly Xaa Xaa Xaa Pro Ala Lys Xaa Xaa Xaa Xaa Arg Xaa Xaa Xaa
Xaa Xaa Cys His Xaa Xaa Pro Xaa Xaa Xaa Xaa Xaa Xaa Xaa Lys Gly Xaa His Xaa
Arg Xaa Cys Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Trp Val Val Pro Gly
Ala ~~Leu~~ Pro Gln Xaa,

wherein the isoleucine residue at position 12 may be ~~either~~ substituted with a methionine ~~or~~ isoleucine residue;

the serine residue at position 18 may be ~~either~~ substituted with a cysteine ~~or~~ serine residue;

the isoleucine residue at position 19 may be ~~either~~ isoleucine ~~or~~ substituted with a valine residue;

the threonine residue at position 22 may be ~~either~~ substituted with a serine ~~or~~ threonine residue;

the lysine residue at any of positions 25, 26, 61, or 64 may be ~~either~~ substituted with an arginine ~~or~~ lysine residue;

the arginine residue at position 26, may be substituted with a lysine residue;

the arginine residue at position 27 may be ~~either~~ substituted with a histidine ~~or~~ arginine residue;

the asparagine residue at position 51 may be ~~either~~ substituted with a threonine ~~or~~ asparagine residue;

the histidine residue at position 55 may be ~~either~~ substituted with an asparagine ~~or~~ histidine residue;

the valine residue at position 81 may be ~~either~~ substituted with an isoleucine ~~or~~ valine residue; and

the residues at any of positions 5, 8, 10, 11, 14, 17, 20, 31, 32, 33, 34, 36, 37, 38, 39, 40, 43, 44, 46, 47, 48, 49, 50, 52, 57, 59, 62, 65, 66, 67, 68, 69, 70, or 71 may be substituted with any naturally occurring amino acid; and

the residue at any of positions 37, 38, 39, or 65 may be any naturally occurring amino acid or may be absent.

Claim 16 (previously amended): An isolated polypeptide encoded by a nucleic acid molecule comprising a nucleotide sequence:

(a) as set forth in SEQ ID NO: 4;

- (b) of a DNA insert encoding a Secs-1 polypeptide in ATCC Deposit No. PTA-1755; or
- (c) encoding a polypeptide having an amino acid sequence as set forth in SEQ ID NO: 5.

Claim 17-45 (cancelled).

Claim 46 (original): A fusion polypeptide comprising the polypeptide of any of Claims 13, 14, or 15 fused to a heterologous amino acid sequence.

Claim 47 (original): The fusion polypeptide of Claim 46, wherein the heterologous amino acid sequence is an IgG constant domain or fragment thereof.

Claims 48-56 (cancelled).

Fig
Claim 57 (currently amended): A polypeptide produced by a process comprising

(a) culturing a host cell containing a vector comprising a nucleic acid molecule having a nucleotide sequence of a region of the nucleotide sequence of:

- (i) SEQ ID NO: 4; or
- (ii) a DNA insert encoding a Secs-1 polypeptide in ATCC Deposit No. PTA-1755;

wherein the nucleic acid molecule encodes the polypeptide which is produced, the polypeptide is a fragment of the amino acid sequence set forth in SEQ ID NO: 5 of at least about 25 amino acid residues, but not more than 80 amino acid residues, and wherein the polypeptide fragment upon injection into an animal produces an antibody that binds to the polypeptide set forth in SEQ ID NO: 5;

under suitable conditions to express the polypeptide; and optionally

- (b) isolating the polypeptide from the culture.

Claim 58 (currently amended): A polypeptide produced by a process comprising:

(a) culturing a host cell containing a vector comprising a nucleic acid molecule having a nucleotide sequence encoding a polypeptide having ~~the~~ an amino acid sequence as set forth in SEQ ID NO: 5 [[:]

Met Arg Leu Leu Xaa Leu Ser Xaa Leu Xaa Xaa Xaa Leu Xaa Leu Cys Xaa Xaa Xaa
 Xaa Ser Xaa Glu Gly Xaa Xaa Xaa Pro Ala Lys Xaa Xaa Xaa Xaa Arg Xaa Xaa Xaa
 Xaa Xaa Cys His Xaa Xaa Pro Xaa Xaa Xaa Xaa Xaa Xaa Lys Gly Xaa His Xaa
 Arg Xaa Cys Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Trp Val Val Pro Gly
 Ala Leu Pro Gln Xaa,

wherein the isoleucine residue at position 12 may be ~~either substituted with a methionine or~~
isoleucine residue;

the serine residue at position 18 may be ~~either substituted with a cysteine or serine~~ residue;

the isoleucine residue at position 19 may be ~~either isoleucine or~~ substituted with a valine residue;

the threonine residue at position 22 may be ~~either substituted with a serine or threonine~~ residue;

the lysine residue at any of positions 25, 26, 61, or 64 may be ~~either substituted with an arginine or~~
lysine residue;

the arginine residue at position 26, may be substituted with a lysine residue;

the arginine residue at position 27 may be ~~either substituted with a histidine or arginine~~ residue;

the asparagine residue at position 51 may be ~~either substituted with a threonine or asparagine~~
residue;

the histidine residue at position 55 may be ~~either substituted with an asparagine or histidine~~ residue;

the valine residue at position 81 may be ~~either substituted with an isoleucine or valine~~ residue; and

the residues at any of positions 5, 8, 10, 11, 14, 17, 20, 31, 32, 33, 34, 36, 37, 38, 39, 40, 43, 44, 46,
 47, 48, 49, 50, 52, 57, 59, 62, 65, 66, 67, 68, 69, 70, or 71 may be substituted with any naturally
 occurring amino acid; and

the residue at any of positions 37, 38, 39, or 65 may be any naturally occurring amino acid or may be
 absent;

wherein the nucleic acid molecule encodes the polypeptide which is produced;

under suitable conditions to express the polypeptide, and optionally

(b) isolating the polypeptide from the culture.

Claim 59 (original): The polypeptide of any of Claims 9, 57, or 58, wherein the host cell is a
 eukaryotic cell.

Claim 60 (original): The polypeptide of any of Claims 9, 57, or 58, wherein the host cell is a prokaryotic cell.

Claim 61 (previously amended): An isolated polypeptide encoded by a nucleic acid molecule comprising a nucleotide sequence of a region of the nucleotide sequence of:

(a) SEQ ID NO: 4; or

(b) a DNA insert encoding a Secs-1 polypeptide in ATCC Deposit No. PTA-1755;

wherein the nucleic acid molecule encodes a polypeptide fragment of at least about 25 amino acid residues, but not more than 80 amino acid residues, and wherein upon injection into an animal the polypeptide fragment produces an antibody that binds to the polypeptide set forth in SEQ ID NO: 5.

Fig
Claim 62 (currently amended): An isolated polypeptide encoded by a nucleic acid molecule having a nucleotide sequence encoding a polypeptide having ~~the~~ an amino acid sequence as set forth in SEQ ID NO: 5[[:]]

~~Met Arg Leu Leu Xaa Leu Ser Xaa Leu Xaa Xaa Xaa Leu Xaa Leu Cys Xaa Xaa Xaa
Xaa Ser Xaa Glu Gly Xaa Xaa Xaa Pro Ala Lys Xaa Xaa Xaa Xaa Arg Xaa Xaa Xaa
Xaa Xaa Cys His Xaa Xaa Pro Xaa Xaa Xaa Xaa Xaa Xaa Lys Gly Xaa His Xaa
Arg Xaa Cys Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Trp Val Val Pro Gly
Ala Leu Pro Gln Xaa,~~

wherein the isoleucine residue at position 12 may be ~~either substituted with a methionine or~~ isoleucine residue;

the serine residue at position 18 may be ~~either substituted with a cysteine or serine~~ residue;

the isoleucine residue at position 19 may be ~~either isoleucine or substituted with a valine~~ reside;

the threonine residue at position 22 may be ~~either substituted with a serine or threonine~~ residue;

the lysine residue at any of positions 25, 26, 61, or 64 may be ~~either substituted with an arginine or~~ lysine residue;

the arginine residue at position 26, may be substituted with a lysine residue;

the arginine residue at position 27 may be either substituted with a histidine or arginine residue;

the asparagine residue at position 51 may be ~~either substituted with a threonine or asparagine~~
residue;

the histidine residue at position 55 may be ~~either substituted with an asparagine or histidine~~ residue;

the valine residue at position 81 may be ~~either substituted with an isoleucine or valine~~ residue; and

Fig
the residues at any of positions 5, 8, 10, 11, 14, 17, 20, 31, 32, 33, 34, 36, 37, 38, 39, 40, 43, 44, 46,
47, 48, 49, 50, 52, 57, 59, 62, 65, 66, 67, 68, 69, 70, or 71 may be substituted with any naturally
occurring amino acid; and

the residue at any of positions 37, 38, 39, or 65 may be any naturally occurring amino acid or may be
absent.
